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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,470	02/02/2001	Ioannis Pavlidis	H0001072	7145

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EXAMINER

BALI, VIKKRAM

ART UNIT PAPER NUMBER

2623

DATE MAILED: 11/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/776,470

Applicant(s)

PAVLIDIS, IOANNIS

Examiner

Vikram Bali

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/9/2004.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

In response to the amendment filled on 7/12/2004, all the amendments have been entered and the action follows:

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As mentioned in the claim 5 "the periorbital region" is different then the "periorbital region of an eye" as claimed in claim 1. Also, claim 5 compares the image data of "the periorbital region" which is different from the "periorbital region of an eye" as claimed in claim 1. this makes the claim indefinite.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-12, 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tessal (WO 98/08431).

With respect to claim 1, Tessal discloses the thermal imaging of face of a person and using that determining a physiological state of a person, (see figure 3, and page 2, lines 20-33) as claimed. However, he fails to explicitly disclose the periorbital region of an eye of the person, as claimed. The periorbital region is read as the region of the face surrounding the eye that region is very well include some portion of forehead and some portion of the cheeks of the person. And, as suggested in the page 4, lines 29-35, that simple experiments may reveal other location of the skins that may also be use for finding the physiological state of the person, the periorbital region of an eye does include portions of the forehead and the portions of the cheeks of the person and is well symmetrical, and therefore, can be use to determine the physiological state of the person. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to simply work on the suggestion of the Tessal in order to come up with a thermal detection of the physiological state of the person.

With respect to claim 2, he further discloses, determine anxiety in the person, (see page 1, lines 22-26, the nervousness of the person "anxiety") as claimed.

With respect to claim 4, he further discloses, the thermal image data comprises detecting a change over a plurality of frames in the thermal images data when the

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person is experiencing anxiety, (see page 11 lines 10-25 the thermal images are compared in order to determine the anxiety of the person) as claimed.

With respect to claim 5 as best understood, the thermal image of the periorbital regions and other region of the face and the comparison of the images, (see figure 2, regions 2 and 3 and page 11 lines 10-25 the images of the region 2 and 3 are compared).

With respect to claim 6, he further discloses, the cheek region, (see page 4, lines 31) as claimed.

With respect to claim 8, he further discloses, thermal image data comprises providing mid infrared thermal image data of the at least one region of the face and far infrared thermal image data of the at least one region of the face, (see figure 1, 10 the infrared camera, and the infrared camera obtain the images of the person and this camera does work on the infrared spectrum that includes all mid and far infrared wavelengths) as claimed.

With respect to claim 9, it is well known in the art of identifying to use the face detection algorithm from a scene. Therefore, one ordinary skilled in the art at the time of invention simply use the conventional way of selecting of extracting the face information from a scene using some algorithm in order to get to the regions of the face.

With respect to claim 10, he further discloses, providing image data of a face, and identifying ... on at least bilateral symmetry of the ... face, (see figure 2, the thermal image of the face and the two sides of the face i.e. 2 and 3 are the bilateral symmetry of the face) as claimed.

Claims 11-12, 14-20 are rejected for the same reasons as set forth in the rejection of claims 1-2, 4-10, because claims 11-12, 14-20 are the system claims for the method claims 1-2, 4-10.

### ***Response to Arguments***

3. Applicant's arguments filed 7/12/2004 have been fully considered but they are not persuasive. Applicant argues that there is no suggestion in the reference. Examiner disagrees with the applicant. The reference, suggests in the page 4, lines 29-35, that simple experiments may reveal other location of the skins that may also be use for finding the physiological state of the person. And, the periorbital region is read as the region of the face surrounding the eye that region is very well include some portion of forehead and some portion of the cheeks of the person. And, as suggested in the page 4, lines 29-35, that simple experiments may reveal other location of the skins that may also be use for finding the physiological state of the person, the periorbital region of an eye does include portions of the forehead and the portions of the cheeks of the person and is well symmetrical, and therefore, can be use to determine the physiological state of the person.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

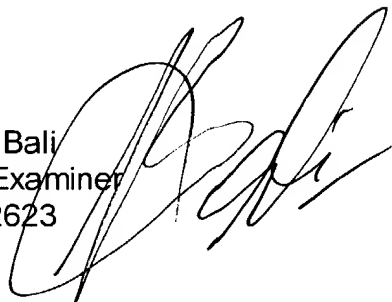
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 703.305.4510. The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703.308.6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vikkram Bali  
Primary Examiner  
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A handwritten signature in black ink, appearing to read 'Vikram Bali', is written over the typed name and title.

vb  
November 23, 2004